Claims

What is Claimed is:

1. A software package for operating on a network including a plurality of network hardware devices, comprising:

at least one networking protocol to transmit and receive data packets over the network;

a hardware device driver communicatively coupled to a first network hardware device;

an enhanced network driver communicatively coupled to the hardware device driver to transmit and receive the data packets using the first network hardware device; and

a control interface to transmit and receive control information to and from the hardware device driver;

at least one of the enhanced network driver and control interface being portable to a second network hardware device.

2. The software package of claim 1, further comprising at least one network application for controlling at least one of the first and second network hardware devices.

3. The software package of claim 1, wherein the at least one networking protocol inserts a destination network address in each data packet being prepared for transmission and the enhanced network driver inserts a source network address in each data packet being prepared for transmission.

4. The software package of claim 1, wherein the hardware device driver initializes the first and second of hardware devices.

5. The software package of claim 4, wherein the initialization includes one of setting of hardware device control registers and setting hardware interrupts.

6. The software package of claim 1, wherein the enhanced network driver includes an interface for communicating the data packets between the hardware device driver and the at least one networking protocol.

7. The software package of claim 1, wherein the hardware device driver includes an interface for communicating the data packets between one of the first and second network hardware devices and the enhanced network driver.

8.   The software package of claim 1, wherein the at least one networking protocol includes a TCP/IP protocol suite.

9.   The software package of claim 2, wherein the at least one network application includes at least one of a web browser and a web server.

10.   The software package of claim 1, wherein the control interface includes an object defining a characteristic of one of the first and second network hardware devices.

11.   The software package of claim 2, wherein the control interface includes an interface for communicating the control information between the hardware device driver and the at least one network application.

12.   A software package for operating on a first hardware device connected to a network, comprising:

a hardware device driver communicatively coupled to the hardware device;

an enhanced network driver communicatively coupled to the hardware device driver to transmit and receive data packets using the hardware device, wherein the enhanced network driver prepares the data packets for transmission

by inserting a source network address of the hardware device into the data packets and passes the data packets to the hardware device driver.

13. The software package of claim 12, wherein the software package operates on a second hardware device connected to the network, the enhanced network driver being transportable from the first hardware device to the second hardware device.

14. The software package of claim 12, wherein the enhanced network driver remains unchanged when the first hardware device driver is replaced with a second hardware device driver.

15. The software package of claim 12, wherein the data packets for transmission include a destination network address and the enhanced network driver correlates the destination network address with a port of the first hardware device.

16. The software package of claim 15, wherein the enhanced network driver includes a look-up table for correlating the destination network address with the port of the first hardware device.

17. The software package of claim 15, wherein the enhanced network driver inserts the port information in the data packet when it correlates the destination network address with the port.

18. The software package of claim 12, further comprising a control interface to transmit and receive control information to and from the hardware device driver.

19. A network system, comprising:

a plurality of interconnected network hardware devices for communicating data packets;

a hardware device driver communicatively coupled to a first one of the network hardware devices;

an enhanced network driver communicatively coupled to the hardware device driver;

at least one networking protocol communicatively coupled to the enhanced network driver; and

a control interface to transmit and receive control information to and from the hardware device driver, at least one of the enhanced network driver and control interface being portable to a second one of the network hardware devices.

20. The network system of claim 19, wherein, when the first network hardware device receives data packets, the data packets are first passed to the hardware device driver and then passed by the hardware device driver to the enhanced network driver.

21. The network system of claim 19, wherein the first and second of network hardware devices are assigned network addresses and data packets are communicated using the network addresses.

22. The network system of claim 19, further comprising at least one network application for controlling at least one of the first and second network hardware devices.

23. The network system of claim 19, wherein the at least one networking protocol includes a TCP/IP protocol suite.

24. The network system of claim 19, wherein the control interface includes an interface for communicating the control information between the hardware device driver and the at least one network application.

25. The network system of claim 19, the first one of the network hardware devices being a router.

26. The network system of claim 19, the first one of the network hardware devices being a network switch.

27. The network system of claim 19, the first one of the network hardware devices being a network interface card.

28. The network system of claim 19, the first one of the network hardware devices being an internet appliance.

29. The network system of claim 19, the first one of the network hardware devices being a personal computer.

30. A network system facilitating communication between a plurality of hardware devices, comprising:

an upper level module for processing data packets and control information;

a hardware driver module controlling a corresponding one of the hardware devices;

an enhanced network driver module providing an interface for transferring data packets between the upper level module and the hardware driver; and

a control interface module providing an interface for transferring control

information between the upper level module and the hardware driver.

31. The system of claim 30, wherein the enhanced network driver module provides

addressing information for the data packets.

32. A method for processing by network software data transmitted on a network, the

network including a plurality of interconnected hardware devices, the method comprising the

steps of:

receiving by a hardware driver corresponding to a first one of the hardware

devices a data packet transmitted over the network;

passing the data packet from the hardware driver to a generic enhanced

network driver module of the network software;

the generic enhanced network driver extracting addressing data from the

data packet and passing the data packet to an upper level module of the network software.